

## **AMENDMENTS TO THE CLAIMS:**

The listing of claims will replace all prior versions, and listings of claims in the application:

### **LISTING OF THE CLAIMS**

1. (Currently amended) A lighting apparatus for emitting white light comprising:  
  
a light source emitting radiation at from about 250 nm to about 550 nm; and  
  
a phosphor composition radiationally coupled to the light source, the phosphor composition comprising  $(\text{Tb}_{1-x-y-z-w}\text{Y}_x\text{Gd}_y\text{Lu}_z\text{Ce}_w)_3\text{M}_r\text{Al}_{s-r}\text{O}_{12+\delta}$ , where M is selected from Sc, In, Ga, Zn, or Mg, and where  $0 < w \leq 0.3$ ,  $0 < x < 1$ ,  $0 < y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq x < 1$ ,  $0 \leq y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq r \leq 4.5$ ,  $4.5 \leq s \leq 6$ , and  $-1.5 \leq \delta \leq 1.5$ .
2. (Original) The lighting apparatus of claim 1, wherein the light source is a semiconductor light emitting diode (LED) emitting radiation having a wavelength in the range of from about 350 to about 550 nm.
3. (Original) The lighting apparatus of claim 2, wherein the LED comprises a nitride compound semiconductor represented by the formula  $\text{In}_i\text{Ga}_j\text{Al}_k\text{N}$ , where  $0 \leq i$ ,  $0 \leq j$ ,  $0 \leq K$ , and  $i + j + k = 1$ .
4. (Original) The lighting apparatus of claim 1, wherein the light source is an organic emissive structure.
5. (Original) The lighting apparatus of claim 1, wherein the phosphor composition is coated on the surface of the light source.
6. (Original) The lighting apparatus of claim 1, further comprising an encapsulant surrounding the light source and the phosphor composition.
7. (Original) The lighting apparatus of claim 1, wherein the phosphor composition is dispersed in the encapsulant.

8. (Original) The lighting apparatus of claim 1, further comprising a reflector cup.
9. (Original) The lighting apparatus of claim 1, wherein said phosphor composition comprises  $(\text{Tb}_{0.57}\text{Ce}_{0.03}\text{Y}_{0.2}\text{Gd}_{0.2})_3\text{Al}_{4.9}\text{O}_{12+\delta}$ .
10. (Original) The lighting apparatus of claim 1, wherein said phosphor composition further comprises one or more additional phosphor.
11. (Currently amended) The lighting apparatus of claim 10, wherein said one or more additional phosphors are selected from the group consisting of  $(\text{Ba}, \text{Sr}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{F}, \text{Br}, \text{OH})\text{:Eu}^{2+}, \text{Mn}^{2+}, \text{Sb}^{3+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{BPO}_5\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Sr}, \text{Ca})_{10}(\text{PO}_4)_6 \cdot n\text{B}_2\text{O}_3\text{:Eu}^{2+}$ ;  $2\text{SrO} \cdot 0.84\text{P}_2\text{O}_5 \cdot 0.16\text{B}_2\text{O}_3\text{:Eu}^{2+}$ ;  $\text{Sr}_2\text{Si}_3\text{O}_8 \cdot 2\text{SrCl}_2\text{:Eu}^{2+}$ ;  $\text{Ba}_3\text{MgSi}_2\text{O}_8\text{:Eu}^{2+}$ ;  $\text{Sr}_4\text{Al}_{14}\text{O}_{25}\text{:Eu}^{2+}$ ;  $\text{BaAl}_8\text{O}_{13}\text{:Eu}^{2+}$ ;  ~~$\text{Sr}_4\text{Al}_{14}\text{O}_{25}\text{:Eu}^{2+}$ ;  $\text{BaAl}_8\text{O}_{13}\text{:Eu}^{2+}$ ;  $2\text{SrO} \cdot 0.84\text{P}_2\text{O}_5 \cdot 0.16\text{B}_2\text{O}_3\text{:Eu}^{2+}$~~ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{F}, \text{OH})\text{:Eu}^{2+}, \text{Mn}^{2+}, \text{Sb}^{3+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{Al}_2\text{O}_4\text{:Eu}^{2+}$ ;  $(\text{Y}, \text{Gd}, \text{Lu}, \text{Sc}, \text{La})\text{BO}_3\text{:Ce}^{3+}, \text{Tb}^{3+}$ ;  $\text{Ca}_8\text{Mg}(\text{SiO}_4)_4\text{Cl}_2\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_2\text{SiO}_4\text{:Eu}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_2(\text{Mg}, \text{Zn})\text{Si}_2\text{O}_7\text{:Eu}^{2+}$ ;  $(\text{Sr}, \text{Ca}, \text{Ba})(\text{Al}, \text{Ga}, \text{In})_2\text{S}_4\text{:Eu}^{2+}$ ;  $(\text{Y}, \text{Gd}, \text{Tb}, \text{La}, \text{Sm}, \text{Pr}, \text{Lu})_3(\text{Al}, \text{Ga})_5\text{O}_{12}\text{:Ce}^{3+}$ ;  $(\text{Ca}, \text{Sr})_8(\text{Mg}, \text{Zn})(\text{SiO}_4)_4\text{Cl}_2\text{:Eu}^{2+}, \text{Mn}^{2+}$  (GASH);  $\text{Na}_2\text{Gd}_2\text{B}_2\text{O}_7\text{:Ce}^{3+}, \text{Tb}^{3+}$ ;  $(\text{Ba}, \text{Sr})_2(\text{Ca}, \text{Mg}, \text{Zn})\text{B}_2\text{O}_6\text{:K}, \text{Ce}, \text{Tb}$ ;  $(\text{Sr}, \text{Ca}, \text{Ba}, \text{Mg}, \text{Zn})_2\text{P}_2\text{O}_7\text{:Eu}^{2+}, \text{Mn}^{2+}$  (SPP);  $(\text{Ca}, \text{Sr}, \text{Ba}, \text{Mg})_{10}(\text{PO}_4)_6(\text{F}, \text{Cl}, \text{Br}, \text{OH})\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})_2\text{O}_3\text{:Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})_2\text{O}_2\text{S}\text{:Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})\text{VO}_4\text{:Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Ca}, \text{Sr})\text{S}\text{:Eu}^{2+}$ ;  $\text{SrY}_2\text{S}_4\text{:Eu}^{2+}$ ;  $\text{CaLa}_2\text{S}_4\text{:Ce}^{3+}$ ;  ~~$(\text{Ca}, \text{Sr})\text{S}\text{:Eu}^{2+}$~~ ;  $3.5\text{MgO} \cdot 0.5\text{MgF}_2 \cdot \text{GeO}_2\text{:Mn}^{4+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgP}_2\text{O}_7\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Y}, \text{Lu})_2\text{WO}_6\text{:Eu}^{3+}, \text{Mo}^{6+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_x\text{Si}_y\text{N}_z\text{:Eu}^{2+}$ .
12. (Canceled)
13. (Original) The lighting apparatus of claim 1, wherein said lighting apparatus has a CCT value from about 2500 to 8000.

14. (Original) The lighting apparatus of claim 1, wherein said lighting apparatus has a CRI value of greater than 60.
15. (Original) A lighting apparatus for emitting white light comprising:  
a light source emitting radiation at from about 250 to about 550 nm; and  
a phosphor composition radiationally coupled to the light source, the phosphor composition comprising  $(RE_{1-x}Sc_xCe_y)_2A_{3-p}B_pSi_{z-q}Ge_qO_{12+\delta}$ , where RE is selected from a lanthanide ion or  $Y^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 \leq x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ .
16. (Original) The lighting apparatus of claim 15, wherein the light source is a semiconductor LED emitting radiation having a wavelength in the range of from about 350 to about 550 nm.
17. (Original) The lighting apparatus of claim 16, wherein the LED comprises a nitride compound semiconductor represented by the formula  $In_iGa_jAl_kN$ , where  $0 \leq i$ ,  $0 \leq j$ ,  $0 \leq k$ , and  $i + j + k = 1$ .
18. (Original) The lighting apparatus of claim 15, wherein said light source is an organic emissive structure.
19. (Original) The lighting apparatus of claim 15, wherein the phosphor composition is coated on the surface of the light source.
20. (Original) The lighting apparatus of claim 15, further comprising an encapsulant surrounding the light source and the phosphor composition.
21. (Original) The lighting apparatus of claim 15, wherein the phosphor composition is dispersed in the encapsulant.
22. (Original) The lighting apparatus of claim 15, further comprising a reflector cup.

23. (Original) The lighting apparatus of claim 15, wherein said phosphor composition comprises  $(\text{Lu}_{0.955}\text{Ce}_{0.045})_2\text{CaMg}_2\text{Si}_3\text{O}_{12}$ .
24. (Original) The lighting apparatus of claim 15, wherein said phosphor composition comprises two or more distinct phosphors having the formula  $(\text{RE}_{1-x}\text{Sc}_x\text{Ce}_y)_2\text{A}_{3-p}\text{B}_p\text{Si}_{z-q}\text{Ge}_q\text{O}_{12+\delta}$ , where RE is selected from a lanthanide ion or  $\text{Y}^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 < x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ , wherein each of said distinct phosphors has a different emission spectrum.
25. (Original) The lighting apparatus of claim 15, wherein said phosphor composition further comprises one or more additional phosphors.
26. (Currently amended) The lighting apparatus of claim 25, wherein said one or more additional phosphors are selected from the group consisting of  
 $(\text{Ba}, \text{Sr}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{F}, \text{Br}, \text{OH}):\text{Eu}^{2+}, \text{Mn}^{2+}, \text{Sb}^{3+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{BPO}_5:\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  
 $(\text{Sr}, \text{Ca})_{10}(\text{PO}_4)_6 \cdot n\text{B}_2\text{O}_3:\text{Eu}^{2+}$ ;  $2\text{SrO} \cdot 0.84\text{P}_2\text{O}_5 \cdot 0.16\text{B}_2\text{O}_3:\text{Eu}^{2+}$ ;  
 $\text{Sr}_2\text{Si}_3\text{O}_8 \cdot 2\text{SrCl}_2:\text{Eu}^{2+}$ ;  $\text{Ba}_3\text{MgSi}_2\text{O}_8:\text{Eu}^{2+}$ ;  $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu}^{2+}$ ;  $\text{BaAl}_8\text{O}_{13}:\text{Eu}^{2+}$ ;  
 ~~$\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu}^{2+}$ ;  $\text{BaAl}_8\text{O}_{13}:\text{Eu}^{2+}$ ;  $2\text{SrO} \cdot 0.84\text{P}_2\text{O}_5 \cdot 0.16\text{B}_2\text{O}_3:\text{Eu}^{2+}$ ;~~  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{F}, \text{OH}):\text{Eu}^{2+}, \text{Mn}^{2+}, \text{Sb}^{3+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{Al}_2\text{O}_4:\text{Eu}^{2+}$ ;  
 $(\text{Y}, \text{Gd}, \text{Lu}, \text{Sc}, \text{La})\text{BO}_3:\text{Ce}^{3+}, \text{Tb}^{3+}$ ;  $\text{Ca}_8\text{Mg}(\text{SiO}_4)_4\text{Cl}_2:\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})_2\text{SiO}_4:\text{Eu}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_2(\text{Mg}, \text{Zn})\text{Si}_2\text{O}_7:\text{Eu}^{2+}$ ;  
 $(\text{Sr}, \text{Ca}, \text{Ba})(\text{Al}, \text{Ga}, \text{In})_2\text{S}_4:\text{Eu}^{2+}$ ;  $(\text{Y}, \text{Gd}, \text{Tb}, \text{La}, \text{Sm}, \text{Pr}, \text{Lu})_3(\text{Al}, \text{Ga})_5\text{O}_{12}:\text{Ce}^{3+}$ ;  
 $(\text{Ca}, \text{Sr})_8(\text{Mg}, \text{Zn})(\text{SiO}_4)_4\text{Cl}_2:\text{Eu}^{2+}, \text{Mn}^{2+}$  (GASH);  $\text{Na}_2\text{Gd}_2\text{B}_2\text{O}_7:\text{Ce}^{3+}, \text{Tb}^{3+}$ ;  
 $(\text{Ba}, \text{Sr})_2(\text{Ca}, \text{Mg}, \text{Zn})\text{B}_2\text{O}_6:\text{K}, \text{Ce}, \text{Tb}$ ;  $(\text{Sr}, \text{Ca}, \text{Ba}, \text{Mg}, \text{Zn})_2\text{P}_2\text{O}_7:\text{Eu}^{2+}, \text{Mn}^{2+}$  (SPP);  
 $(\text{Ca}, \text{Sr}, \text{Ba}, \text{Mg})_{10}(\text{PO}_4)_6(\text{F}, \text{Cl}, \text{Br}, \text{OH}):\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})_2\text{O}_3:\text{Eu}^{3+}, \text{Bi}^{3+}$ ;  
 $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})_2\text{O}_2\text{S}:\text{Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})\text{VO}_4:\text{Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Ca}, \text{Sr})\text{S}:\text{Eu}^{2+}$ ;  
 $\text{SrY}_2\text{S}_4:\text{Eu}^{2+}$ ;  $\text{CaLa}_2\text{S}_4:\text{Ce}^{3+}$ ;  ~~$(\text{Ca}, \text{Sr})\text{S}:\text{Eu}^{2+}$~~ ;  $3.5\text{MgO} \cdot 0.5\text{MgF}_2 \cdot \text{GeO}_2:\text{Mn}^{4+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgP}_2\text{O}_7:\text{Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Y}, \text{Lu})_2\text{WO}_6:\text{Eu}^{3+}, \text{Mo}^{6+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_x\text{Si}_y\text{N}_z:\text{Eu}^{2+}$ .

27. (Original) The lighting apparatus of claim 15, further comprising a  $(\text{Tb}, \text{Y})_3\text{Al}_{4.9}\text{O}_{12-\delta}:\text{Ce}^{3+}$  phosphor wherein  $-1 \leq \delta \leq 1$ .
28. (Original) The lighting apparatus of claim 15, wherein  $2.9 \leq z \leq 3.1$ .
29. (Original) The lighting apparatus of claim 15, wherein  $0 \leq q/(z-q) \leq 0.5$ .
30. (Original) The lighting apparatus of claim 15, wherein A is Ca.
31. (Original) The lighting apparatus of claim 15, wherein A is Mg.
32. (Original) The lighting apparatus of claim 15, wherein B is Mg.
33. (Original) The lighting apparatus of claim 15, wherein  $y \leq 0.05$ .
34. (Original) The lighting apparatus of claim 15, wherein said lighting apparatus has a CCT value from about 2500 to 8000.
35. (Original) The lighting apparatus of claim 15, wherein said lighting apparatus has a CRI value of greater than 60.
36. (Currently amended) A phosphor composition comprising  $(\text{Tb}_{1-x-y-z-w}\text{Y}_x\text{Gd}_y\text{Lu}_z\text{Ce}_w)_3\text{M}_r\text{Al}_{s-r}\text{O}_{12+\delta}$ , where M is selected from Sc, In, Ga, Zn, or Mg, and where  $0 < w \leq 0.3$ ,  $0 < x < 1$ ,  $0 < y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq x < 1$ ,  $0 \leq y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq r \leq 4.5$ ,  $4.5 \leq s \leq 6$ , and  $-1.5 \leq \delta \leq 1.5$ .
37. (Original) The phosphor composition according to claim 36 comprising  $(\text{Tb}_{0.57}\text{Ce}_{0.03}\text{Y}_{0.2}\text{Gd}_{0.2})_3\text{Al}_{4.9}\text{O}_{12+\delta}$ .
38. (Original) The phosphor composition according to claim 36, wherein said phosphor composition is capable of absorbing the radiation emitted by a light source emitting from 400-500 nm and emitting radiation that, when combined with said radiation from said light source, produces white light.

39. (Original) A phosphor composition comprising  $(RE_{1-x}Sc_xCe_y)_2A_{3-p}B_pSi_{z-q}Ge_qO_{12+\delta}$ , where RE is selected from a lanthanide ion or  $Y^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 \leq x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ .
40. (Original) The phosphor composition according to claim 39, wherein  $2.9 \leq z \leq 3.1$ .
41. (Original) The phosphor composition according to claim 39, wherein  $0 \leq q/(z-q) \leq 0.5$ .
42. (Original) The phosphor composition according to claim 39, wherein A is Ca.
43. (Original) The phosphor composition according to claim 39, wherein A is Mg.
44. (Original) The phosphor composition according to claim 39, wherein B is Mg.
45. (Original) The phosphor composition according to claim 39, wherein  $y \leq 0.05$ .
46. (Original) The phosphor composition according to claim 39 comprising  $(Lu_{0.955}Ce_{0.045})_2CaMg_2Si_3O_{12}$ .
47. (Original) The phosphor composition according to claim 39, wherein said phosphor composition is capable of absorbing the radiation emitted by a light source emitting from 400-500 nm and emitting radiation that, when combined with said radiation from said light source, produces white light.
48. (Original) A phosphor blend including a first phosphor selected from the group consisting of  $(Tb,Y)_3Al_{4.9}O_{12-\delta}:Ce^{3+}$  wherein  $-1 \leq \delta \leq 1$  and  $(Tb_{1-x-y-z-w}Y_xGd_yLu_zCe_w)_3M_rAl_{s-r}O_{12+\delta}$ , where M is selected from Sc, In, Ga, Zn, or Mg,

and where  $0 < w \leq 0.3$ ,  $0 \leq x < 1$ ,  $0 \leq y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq r \leq 4.5$ ,  $4.5 \leq s \leq 6$ , and  $-1.5 \leq \delta \leq 1.5$ , and a second phosphor having the formula  $(RE_{1-x}Sc_xCe_y)_2A_{3-p}B_pSi_{z-q}Ge_qO_{12+\delta}$ , where RE is selected from a lanthanide ion or  $Y^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 \leq x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ .

49. (Currently amended) A phosphor composition comprising  $(Ca_{1-x-y-z}Sr_xBa_yCe_z)_3(Sc_{1-a-b}Lu_aD_c)_2Si_{n-w}Ge_wO_{12+\delta}$ , where D is either Mg or Zn,  $0 \leq x < 1$ ,  $0 \leq y < 1$ ,  $0 < z \leq 0.3$ ,  $0 \leq a \leq 1$ ,  $0 \leq c \leq 1$ ,  $0 \leq w \leq 1$ ,  $0 \leq w \leq 3$ ,  $2.5 \leq n \leq 3.5$ , and  $-1.5 \leq \delta \leq 1.5$ .
50. (Currently amended) The phosphor composition according to claim 49, comprising  ~~$Ca_3Sc_2Si_nGe_wO_{12}:Ce^{3+}$~~   $Ca_3Sc_2(Si_xGe_{4-x})_3O_{12}:Ce^{3+}$ , ~~wherein x is from 0.67 to 1.0.~~
51. (Original) The phosphor composition according to claim 50, comprising  $Ca_3Sc_2Si_3O_{12}:Ce^{3+}$ .
52. (Currently amended) The phosphor composition according to claim 50, comprising  $(Ca_{0.99}Ce_{0.01})_3Sc_2Si_3O_{12}:Ce^{3+}$ .
53. (Original) The phosphor composition according to claim 49, wherein said phosphor composition is capable of absorbing radiation having a wavelength of from about 250 to about 490 nm and emitting radiation with an emission maximum at about 505 nm.
54. (Original) The phosphor composition according to claim 49, wherein  $2.9 \leq n \leq 3.1$ .
55. (Canceled)
56. (Original) The phosphor composition according to claim 49, wherein  $x \leq 0.1$ .

57. (Original) The phosphor composition according to claim 49, wherein  $y \leq 0.1$ .
58. (Original) The phosphor composition according to claim 49, wherein  $z \leq 0.05$ .
59. (Original) The phosphor composition according to claim 49, wherein  $a \leq 0.10$ .
60. (Canceled)
61. (Canceled)
62. (Canceled)
63. (Original) The phosphor composition according to claim 49, further comprising  $(\text{Tb}_{1-x-y-z-w}\text{Y}_x\text{Gd}_y\text{Lu}_z\text{Ce}_w)_3\text{M}_r\text{Al}_{s-r}\text{O}_{12+\delta}$ , where M is selected from Sc, In, Ga, Zn, or Mg, and where  $0 < w \leq 0.3$ ,  $0 \leq x < 1$ ,  $0 \leq y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq r \leq 4.5$ ,  $4.5 \leq s \leq 6$ , and  $-1.5 \leq \delta \leq 1.5$ ; and  $(\text{RE}_{1-x}\text{Sc}_x\text{Ce}_y)_2\text{A}_{3-p}\text{B}_p\text{Si}_{z-q}\text{Ge}_q\text{O}_{12+\delta}$ , where RE is selected from a lanthanide ion or  $\text{Y}^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 \leq x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ .
64. (Original) A lighting apparatus comprising a light source emitting radiation having an emission wavelength of from about 250 to about 500 nm and a phosphor composition comprising  $(\text{Ca}_{1-x-y-z}\text{Sr}_x\text{Ba}_y\text{Ce}_z)_3(\text{Sc}_{1-a-b}\text{Lu}_a\text{D}_c)_2\text{Si}_{n-w}\text{Ge}_w\text{O}_{12+\delta}$ , where D is either Mg or Zn,  $0 \leq x < 1$ ,  $0 \leq y < 1$ ,  $0 < z \leq 0.3$ ,  $0 \leq a \leq 1$ ,  $0 \leq c \leq 1$ ,  $0 \leq w \leq 3$ ,  $2.5 \leq n \leq 3.5$ , and  $-1.5 \leq \delta \leq 1.5$ .
65. (Original) The lighting apparatus of claim 64, wherein said lighting apparatus is a white light emitting device.
66. (Original) The lighting apparatus of claim 64, further comprising one or more additional phosphors.



67. (Currently amended) The lighting apparatus of claim 66, wherein said one or more additional phosphors are selected from the group consisting of  
 $(\text{Ba}, \text{Sr}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{F}, \text{Br}, \text{OH})\text{:Eu}^{2+}, \text{Mn}^{2+}, \text{Sb}^{3+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{BPO}_5\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  
 $(\text{Sr}, \text{Ca})_{10}(\text{PO}_4)_6 \cdot n\text{B}_2\text{O}_3\text{:Eu}^{2+}$ ;  $2\text{SrO} \cdot 0.84\text{P}_2\text{O}_5 \cdot 0.16\text{B}_2\text{O}_3\text{:Eu}^{2+}$ ;  
 $\text{Sr}_2\text{Si}_3\text{O}_8 \cdot 2\text{SrCl}_2\text{:Eu}^{2+}$ ;  $\text{Ba}_3\text{MgSi}_2\text{O}_8\text{:Eu}^{2+}$ ;  $\text{Sr}_4\text{Al}_{14}\text{O}_{25}\text{:Eu}^{2+}$ ;  $\text{BaAl}_8\text{O}_{13}\text{:Eu}^{2+}$ ;  
 $\text{Sr}_4\text{Al}_{14}\text{O}_{25}\text{:Eu}^{2+}$ ;  $\text{BaAl}_8\text{O}_{13}\text{:Eu}^{2+}$ ;  $2\text{SrO} \cdot 0.84\text{P}_2\text{O}_5 \cdot 0.16\text{B}_2\text{O}_3\text{:Eu}^{2+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_5(\text{PO}_4)_3(\text{Cl}, \text{F}, \text{OH})\text{:Eu}^{2+}, \text{Mn}^{2+}, \text{Sb}^{3+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgAl}_{10}\text{O}_{17}\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})\text{Al}_2\text{O}_4\text{:Eu}^{2+}$ ;  
 $(\text{Y}, \text{Gd}, \text{Lu}, \text{Sc}, \text{La})\text{BO}_3\text{:Ce}^{3+}, \text{Tb}^{3+}$ ;  $\text{Ca}_8\text{Mg}(\text{SiO}_4)_4\text{Cl}_2\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})_2\text{SiO}_4\text{:Eu}^{2+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_2(\text{Mg}, \text{Zn})\text{Si}_2\text{O}_7\text{:Eu}^{2+}$ ;  
 $(\text{Sr}, \text{Ca}, \text{Ba})(\text{Al}, \text{Ga}, \text{In})_2\text{S}_4\text{:Eu}^{2+}$ ;  $(\text{Y}, \text{Gd}, \text{Tb}, \text{La}, \text{Sm}, \text{Pr}, \text{Lu})_3(\text{Al}, \text{Ga})_5\text{O}_{12}\text{:Ce}^{3+}$ ;  
 $(\text{Ca}, \text{Sr})_8(\text{Mg}, \text{Zn})(\text{SiO}_4)_4\text{Cl}_2\text{:Eu}^{2+}, \text{Mn}^{2+}$  (GAST);  $\text{Na}_2\text{Gd}_2\text{B}_2\text{O}_7\text{:Ce}^{3+}, \text{Tb}^{3+}$ ;  
 $(\text{Ba}, \text{Sr})_2(\text{Ca}, \text{Mg}, \text{Zn})\text{B}_2\text{O}_6\text{:K}, \text{Ce}, \text{Tb}$ ;  $(\text{Sr}, \text{Ca}, \text{Ba}, \text{Mg}, \text{Zn})_2\text{P}_2\text{O}_7\text{:Eu}^{2+}, \text{Mn}^{2+}$  (SPP);  
 $(\text{Ca}, \text{Sr}, \text{Ba}, \text{Mg})_{10}(\text{PO}_4)_6(\text{F}, \text{Cl}, \text{Br}, \text{OH})\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})_2\text{O}_3\text{:Eu}^{3+}, \text{Bi}^{3+}$ ;  
 $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})_2\text{O}_2\text{S}\text{:Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Gd}, \text{Y}, \text{Lu}, \text{La})\text{VO}_4\text{:Eu}^{3+}, \text{Bi}^{3+}$ ;  $(\text{Ca}, \text{Sr})\text{S}\text{:Eu}^{2+}$ ;  
 $\text{SrY}_2\text{S}_4\text{:Eu}^{2+}$ ;  $\text{CaLa}_2\text{S}_4\text{:Ce}^{3+}$ ;  $(\text{Ca}, \text{Sr})\text{S}\text{:Eu}^{2+}$ ;  $3.5\text{MgO} \cdot 0.5\text{MgF}_2 \cdot \text{GeO}_2\text{:Mn}^{4+}$ ;  
 $(\text{Ba}, \text{Sr}, \text{Ca})\text{MgP}_2\text{O}_7\text{:Eu}^{2+}, \text{Mn}^{2+}$ ;  $(\text{Y}, \text{Lu})_2\text{WO}_6\text{:Eu}^{3+}, \text{Mo}^{6+}$ ;  $(\text{Ba}, \text{Sr}, \text{Ca})_x\text{Si}_y\text{N}_z\text{:Eu}^{2+}$ .
68. (Currently amended) The lighting apparatus of claim 64, further comprising at least one phosphor selected from the group consisting of  $(\text{Tb}_{1-x-y-z-w}\text{Y}_x\text{Gd}_y\text{Lu}_z\text{Ce}_w)_3\text{M}_r\text{Al}_{s-r}\text{O}_{12+\delta}$ , where M is selected from Sc, In, Ga, Zn, or Mg, and where  $0 < w \leq 0.3$ ,  $0 \leq x < 1$ ,  $0 \leq y \leq 0.4$ ,  $0 \leq z < 1$ ,  $0 \leq r \leq 4.5$ ,  $4.5 \leq s \leq 6$ , and  $-1.5 \leq \delta \leq 1.5$ , and further wherein at least one of y or z is  $> 0$ ;  $(\text{RE}_{1-x}\text{Sc}_x\text{Ce}_y)_2\text{A}_{3-p}\text{B}_p\text{Si}_{z-q}\text{Ge}_q\text{O}_{12+\delta}$ , where RE is selected from a lanthanide ion or  $\text{Y}^{3+}$ , A is selected from Mg, Ca, Sr, or Ba, B is selected from Mg and Zn, and where  $0 \leq p \leq 3$ ,  $0 \leq q \leq 3$ ,  $2.5 \leq z \leq 3.5$ ,  $0 \leq x < 1$ ,  $0 < y \leq 0.3$ ,  $-1.5 \leq \delta \leq 1.5$ ; and  $(\text{Tb}, \text{Y})_3\text{Al}_{4.9}\text{O}_{12-\delta}\text{:Ce}^{3+}$  wherein  $-1 \leq \delta \leq 1$ .
69. (Original) The lighting apparatus of claim 64, wherein the light source is a semiconductor light emitting diode.

70. (Original) The lighting apparatus of claim 64, wherein said lighting apparatus has a CRI value of greater than 60.
71. (Original) The lighting apparatus of claim 64, wherein said phosphor comprises  $\text{Ca}_3\text{Sc}_2(\text{Si}_x\text{Ge}_{1-x})_3\text{O}_{12}:\text{Ce}^{3+}$ , wherein x is from 0.67 to 1.0.
72. (Original) The lighting apparatus of claim 64, wherein said phosphor comprises  $\text{Ca}_3\text{Sc}_2\text{Si}_3\text{O}_{12}:\text{Ce}^{3+}$ .
73. (Currently amended) The lighting apparatus of claim 64, wherein said phosphor comprises  $(\text{Ca}_{0.99}\text{Ce}_{0.01})_3\text{Sc}_2\text{Si}_3\text{O}_{12}:\text{Ce}^{3+}$ .